

Geometry 6.6 Assignment: Special Quadrilaterals

Omit 16, 18, 23

1. What is your name?

Draw the sides or diagonals of ABCD as described. What special type of quadrilateral is ABCD?

2. $\overline{AC} \cong \overline{BD}$, \overline{AC} & \overline{BD} bisect one another, but \overline{AC} is not perpendicular to \overline{BD} .

3. $\overline{AB} \parallel \overline{CD}$ & $\overline{BC} \cong \overline{DA}$

4. $\overline{AC} \perp \overline{BD}$, \overline{AC} & \overline{BD} bisect one another, but $AC \neq BD$.

5. $\overline{AC} \perp \overline{BD}$, \overline{AC} & \overline{BD} bisect one another, and $\overline{AC} \cong \overline{BD}$.

Write A if the statement is always true, S if the statement is sometimes true and N if the statement is never true.

6. ____ Diagonals of a trapezoid are congruent.

7. ____ A square is a rectangle.

8. ____ Opposite angles of an isosceles trapezoid are congruent.

9. ____ The diagonals of a parallelogram are perpendicular.

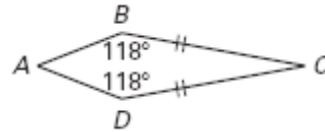
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Which two segments or angles must be congruent to enable you to prove ABCD is the given quadrilateral? Explain your reasoning. There may be more than one right answer.

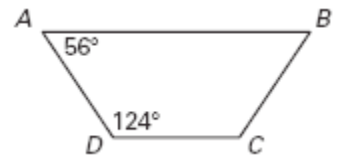
10. Rectangle



11. Kite

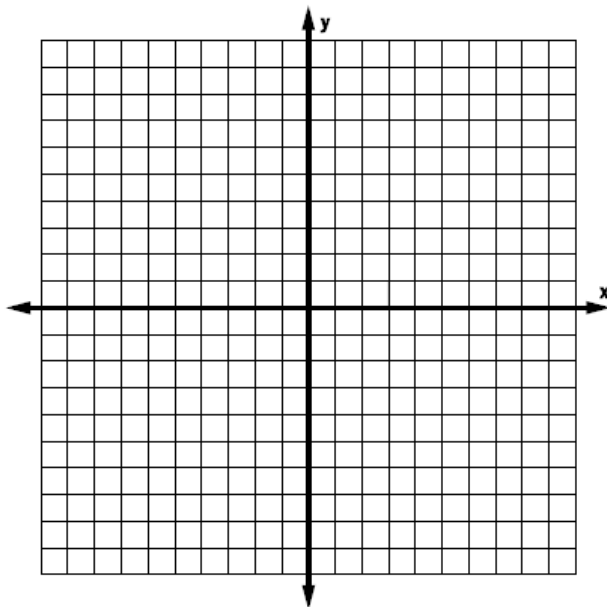


12. Isosceles Trapezoid



What kind of quadrilateral is PQRS? Justify your answer.

13. P(-1, 3), Q(4, 2), R(1, -1), S(-4, 0)

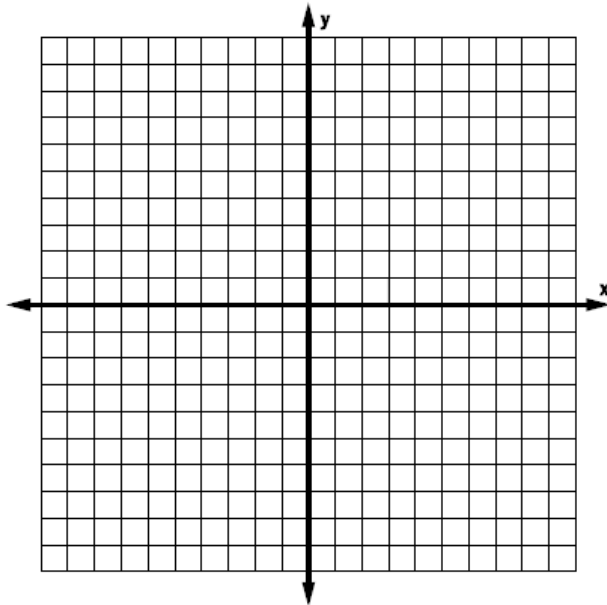


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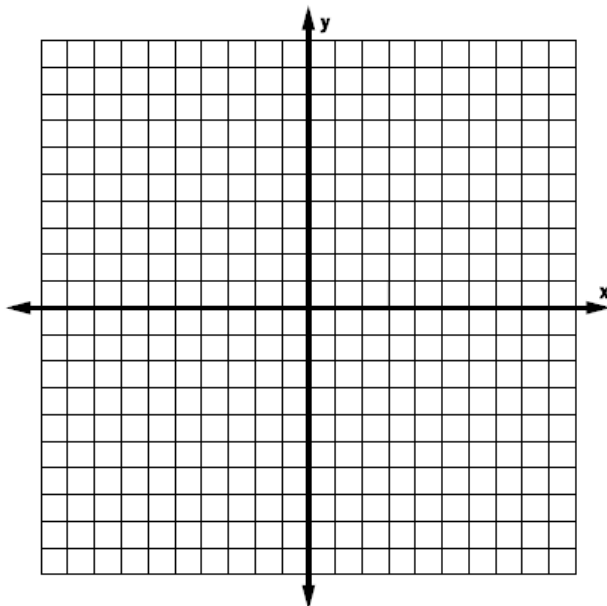
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What kind of quadrilateral is PQRS? Justify your answer.

- 14.** $P(-3, 5)$, $Q(-7, 6)$, $R(-9, -2)$, $S(-5, -3)$



- 15.** $P(-2, 9)$, $Q(-2, -1)$, $R(-5, 5)$, $S(-5, 7)$



- 16.** Use the quadrilateral in Exercise 13. Find the midpoint of each side. Connect the midpoints to form a new quadrilateral. What kind of quadrilateral is formed?

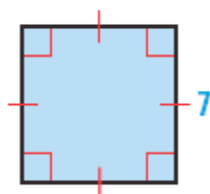
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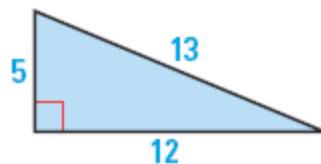
Review.

Find the area of the figure. (Chapter 1 Section 7)

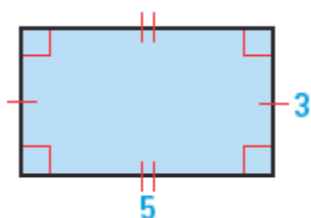
17.



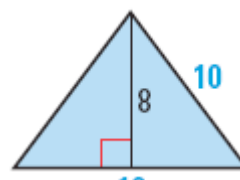
18.



19.

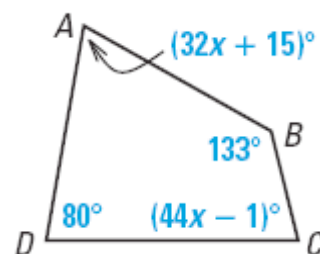


20.



Use the diagram to answer questions 21 and 22. (Chapter 6 Section 1)

21. What is the value of x ?



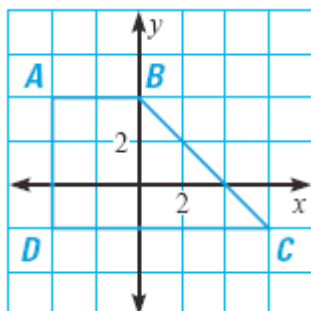
22. What is $m\angle A$?

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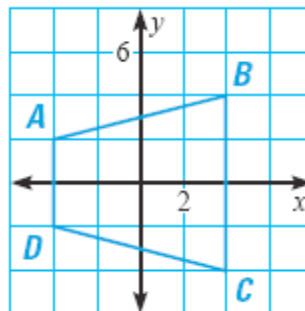
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Find the length of the midsegment of the trapezoid. (Chapter 6 Section 5)

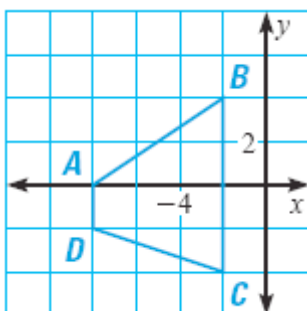
23.



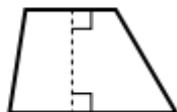
24.



25.



Trapezium
(Amer. Eng.)



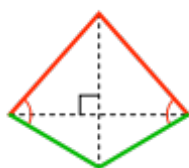
Trapezoid (Amer. Eng.)
Trapezium (Brit. Eng.)



Isosceles trapezoid (Am.)
Isosceles trapezium (Br.)



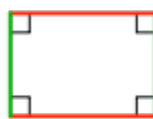
Parallelogram



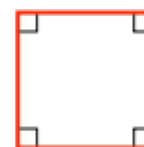
Kite



Rhombus



Rectangle



Square

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